

**Notice of Allowability**

Application No.

10/627,979

Examiner

John B. Strege

Applicant(s)

YOKOTA ET AL.

Art Unit

2624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 10/19/07.
2. ☒ The allowed claim(s) is/are 31-51.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 12/10/07.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

|                          |                                      |                                      |  |
|--------------------------|--------------------------------------|--------------------------------------|--|
| <b>Interview Summary</b> | <b>Application No.</b><br>10/627,979 | <b>Applicant(s)</b><br>YOKOTA ET AL. |  |
|                          | <b>Examiner</b><br>John B. Strege    | <b>Art Unit</b><br>2624              |  |

All participants (applicant, applicant's representative, PTO personnel):

(1) John B. Strege. (3) \_\_\_\_\_

(2) Glenn Law Reg# 34,371. (4) \_\_\_\_\_

Date of Interview: 10 December 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: 40-48.

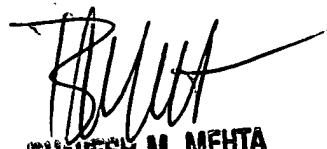
Identification of prior art discussed: \_\_\_\_\_

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
**BHAVESH M. MEHTA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Examiner phoned the Applicant's representative to discuss an Examiner's amendment to claims 40-48 to change the unstatutory "computer program embodied in a computer readable medium" to the statutory language of "a computer readable medium embodying a computer program". The Applicant's representative agreed to the change thus putting the Application in accordance with the current USPTO guidelines for statutory subject matter, and an Examiners amendment will follow .

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Glenn Law Reg#34,371 on 12/10/07.

The application has been amended as follows:

In **claim 40**, please replace on line 1, "a computer program embodied in a computer readable medium" to --a computer readable medium embodying a computer program--.

In **claim 41**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 42**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 43**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 44**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 45**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 46**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 47**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

In **claim 48**, please replace on line 1 "the computer program embodied in a computer readable medium" to --the computer readable medium embodying a computer program--.

The changes were made to make the claims statutory according to the USPTO guidelines.

***Response to Amendment***

2. The amendment received 10/19/07 has been entered in full. Claims 1-30 have been cancelled and claims 31-51 were added.

***Response to Arguments***

3. Applicant's arguments, see pages 9-11, filed 10/19/07, with respect to the claims have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

***Allowable Subject Matter***

4. Claims 31-51 are allowed.

5. The following is an examiner's statement of reasons for allowance: As persuasively argued by the applicants none of the prior art discloses in combination with the other limitations of the claim a method/apparatus/computer readable medium of extracting a region of interest from a plurality of cross-sectional images of a sliced three-dimensional object comprising obtaining a pixel value of a third pixel inside the first temporary region and near the first pixel, if the first pixel is determined to be outside the region of interest; determining whether the second pixel or third pixel is inside the region of interest based on the pixel value of the second pixel or third pixel obtained, the first value, and the second value; selecting, as a second temporary region, a region that is at the same position as the initial region including all pixels that have been determined to be inside the region of interest in the second cross-sectional image, from a third cross-sectional image corresponding to a third cross section next to the second cross section; obtaining a pixel value of a fourth pixel near the second temporary region calculating a third value based on pixel values of each pixel inside the first temporary region and the initial region; calculating a fourth value based on pixel values of each pixel outside the first temporary region and the initial region; and determining whether the fourth pixel is

inside the region of interest based on the pixel value of the fourth pixel, the third value, and the fourth value. Thus claims 31-51 are allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

  
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